THE INDO-ORIENTAL TRIBE CHERITRINI (LEPIDOPTERA : LYCAENIDAE)

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Pp. 75–103 ; 4 *Pls.*

BULLETIN OF
THE BRITISH MUSEUM (NATURAL HISTORY)
ENTOMOLOGY Vol. 20 No. 3
LONDON: 1967

THE BULLETIN OF THE BRITISH MUSEUM (NATURAL HISTORY), *instituted in* 1949, *is issued in five series corresponding to the Departments of the Museum, and an Historical series.*

Parts will appear at irregular intervals as they become ready. Volumes will contain about three or four hundred pages, and will not necessarily be completed within one calendar year.

In 1965 *a separate supplementary series of longer papers was instituted, numbered serially for each Department.*

This paper is Vol. 20, *No.* 3 *of the Entomological series. The abbreviated titles of the periodicals cited follow those of the World List of Scientific Periodicals.*

World List abbreviation
Bull. Br. Mus. nat. Hist. (Ent.).

TRUSTEES OF
THE BRITISH MUSEUM (NATURAL HISTORY)

Issued 21 *April,* 1967 *Price* £1

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SYNOPSIS

Like the Horagini, this small tribe comprises eight species. It has, however, been divided into four genera, three being monospecific, and musters only 29 taxa in its nomenclature. All these are discussed and four new ones are described.

INTRODUCTION

The Cheritrini comprises the genera *Cheritrella* and *Ticherra* de Nicéville, *Cheritra* Moore and *Ritra* de Nicéville, which are discussed in that sequence. It is one of three isolated tribes in oriental Lycaenidae of which the others are the Horagini (see Cowan, 1966*b*) and the much more numerous Drupadiini (formerly referred to as Marmessini, but *Marmessus* Hübner must be used for American Riodinidae, and *Drupadia* Moore stands ; see Cowan, 1966*c*).

De Nicéville's three genera are monospecific, structurally distinct, and easily separated. *Cheritra* by contrast has four or five species of diverse appearance but which scarcely overlap. To the taxa hitherto included in *Ticherra* one is here added which extends the range to Borneo and which till now had floated uneasily between several other widely different genera. Though of distinctive appearance it conforms to the general subspeciation trend of the tribe and is treated as the Bornean subspecies rather than a second species in the genus.

Compared with that of Horagini the history of the nomenclature of the tribe has been straightforward and uneventful. The aim of the present work is to emphasize its entity, to include all its taxa, and to list all the primary references. A catalogue of the specimens in the British Museum (Natural History), hereafter abbreviated to B.M. (N.H.), is given.

STATUS OF THE TRIBE

Evans (1932) and Corbet (1956) are the two modern authors cover ng the oriental Rhopalocera, the former having been brought up to date for the Lycaenidae portion, in nomenclature but not in arrangement, in the valuable contribution by Cantlie (1963).

For our tribes, Corbet is to be regarded as an advancement on the arrangement in Evans–Cantlie in that his keys will bring *Cheritrella* (though, not yet found in Malaya, it is not included) next to the other members of the tribe, instead of interposing the unrelated *Neomyrina*. This improved grouping is achieved by employing as a key character the position in the fore wing of vein 5 in preference to that of the much more mobile vein 9. The grouping thus achieved is confirmed by anatomical dissection, and " looks " equally natural.

Prior to this, comparative hind wing tail-lengths were resorted to as differential key characters. That this ultimate resource proved sufficiently reliable can hardly have been fortuitous, but its significance is not clear. The three filamentous tails at veins 1–3 of the Horagini hind wing are unique among the smooth-eyed genera, where they are paralleled only by *Semanga* which is lobed at vein 1 and tailed at veins 2–4, and they are matched among the hairy-eyed genera only in *Catapaecilma*. There are several broadly " fluffy-tailed " genera with the longest tail at vein 2 as in the Cheritrini, but they are well keyed out by Corbet to the Drupadiini (" *Marmessus* "), to the rightful exclusion of *Eooxylides* and *Thamala*.

In all these tribes and associated genera the venation of the sexes is alike, and fore wing vein 8 is always absent. In the Cheritrini vein 9 always stems from the middle of vein 7, originating well before the end of vein 10, whereas in the Horagini and nearly all the Drupadiini it is absent and vein 7 is unbranched.

The basal recurrent spur of fore wing vein 1, mentioned as occurring in most of the " Theclinae " by Corbet (1956 : 257), is present throughout this tribe, though not shown in his illustration of the *Cheritra* venation (l.c. : 347, fig. 129).

The Cheritrini is the only tribe of the three with a species known to occur in Hainan. Like the Horagini it has one species which reaches Ceylon, but like the Drupadiini it does not range south or east of Bali, Borneo (though one highly differentiated subspecies of a *Drupadia* appears in Celebes), and Mindanao.

WING-PATTERN

As the Horagini broadly conform to a tribal wing-pattern, so do the Cheritrini, but the latter are not so exclusive, having a more basic Lycaenine design found in several other tribes and individuals. The typical pattern is simple ; a plain unicolorous upperside with white tornal markings on the hind wing, and a pale underside with simple linear cell-end bars and postdiscal lines on both wings, and hind wing tornal black spots and metallic blue scaling.

In this tribe also, the species show a marked parallel subspeciation when entering the tropics and passing round them. In passing from Ceylon through India, East Pakistan and Yunnan, to the Kra Isthmus and Mergui Archipelago, the underside colour changes from pure white with faint grey lines to white with broadly orange flushed outer margins and fulvous lines. Thereafter, through Sumatra and Malaya eastwards, the underside becomes more uniformly fulvous, obscuring the markings except in the tornal half of the hind wing, where they become broader and black. This applies to *Cheritra*. *Cheritrella*, restricted to the north, is aberrant. *Ticherra* is also aberrant in the north but conforms remarkably well in Sumatra, Malaya and Borneo. *Ritra* represents an extreme development of the eastern trend of *Cheritra*.

In this tribe, unlike the Horagini and nearly half the Drupadiini, there is complete sexual dimorphism in that, whereas the female upperside is plain dark brown (in the east with a basal orange flush), that of the male is plain shining purplish, orange, or deep green. Exceptional again is *Cheritrella*, whose female upperside is marked with dull blue and white.

MALE GENITALIA

Probably because the inter-specific distinctions in India and Malaya have never been in doubt, no work seems to have been done on the genitalia of this tribe before. Only those of *C. freja* have ever been figured (Shirôzu & Saigusa, 1962 : 55). For Lycaenidae they are unusually small and squat, so small that the figures on the accompanying plates are to a scale about 40% greater than that used for the physically much smaller Horagini.

The vinculum is short, broad and deep, tapered dorsally and ventrally ; there is no saccus, the ventral end being curved out distally to seat the valvae. The twin uncal lobes are simple, lacking brachia or falces, but each with a thin tapered anterior process directed within the vinculum towards the maneca, like the root of a tooth. This uncal " radix " may serve the same purpose as a gnathos, or as a brachium, in more elongate armatures, to lead or guide the aedeagus from above. It may be actually the *peniculus* of the otherwise obsolete tegumen.

The valvae are ventrally bulbous and basally fused ; their hemispherical sacculi are united. Directed caudad from the base of the costa, or dorsal edge, of each is a prominent long horn or style ending in a recurved or inturned spike. Cephalad from the extreme base of the costa, representing the footstalk or transtilla always present in Horagini and prominent in Drupadiini, there is a tenuous connection to the anellus. The juxta, present in Horagini, is lacking in Cheritrini and Drupadiini.

The typical shape of the *Cheritra* valva is exaggerated in the larger but more attenuate *Ritra* armature, and modified in the other two genera. In *Ticherra* the dorsal horns are flattened vertically and the broad, spiked tips incurved, while the solid tapered horns of *Cheritrella* are sinuous. This last genus has a prominent apical projection on the ventral lobe. The fore and aft elongation of the *Ritra* valva results in the unusual situation that its base, and consequently the bulk of the aedeagus, lie cephalad of the vinculum. The extended, comparatively upright unci of *Cheritrella*, its elongate and upright valvae, and their distal dentation, are all interesting trends to the format of the Drupadiini.

The aedeagus in *Cheritra* is short and stout, and is strongly armoured along its dorsal and ventral surfaces, both before and after the rim (i.e. outside and inside), with long narrow rasps of minute cephalad directed dentations. These rasps may assist in retaining the aedeagus *in cop.* and, though quite different in appearance, are perhaps analogous to the *radulae* of Roepke (1938) in Nymphalidae. The rasps are reduced in extent and size in *Cheritrella*, and are replaced in the oblique-rimmed, spout-like aedeagus of *Ticherra* by lateral flaps or flanges. The long, fragile but better suspended aedeagus of *Ritra* is slightly broadened and distinctly fluted at the tip, but no serrations are visible.

The slim aedeagus of *Ritra* is firmly suspended in position by a strongly sclerotized strap-like structure which emanates rigidly from near its base and, tapering, is slung over the dorsal saddle between the valvae like the curl of a leaf-spring. This structure is only weakly developed, but still traceable, in the other genera, where it appears much nearer the apex of the aedeagus. It is presumably a modification of the anellifer, analogous to the *fulcrum* in *Everes* described by Bethune-Baker (1913 : 153, pl. 5). But it is an inversion of the *fulcrum*, which was a prop rather than a strap, being pivoted to the base rather than the dorsum of the valvae, while being of equivalent length " so as to reach up to the top edge of the clasp ", where it forked the aedeagus near the rim.

The aedeagus is primed with cornuti in all species. *Cheritrella* has a pair ; one large and pear-shaped, the other still larger and elongate, both in a voluminous vesica. The tenuous vesica of *Ritra*, like that of *Ticherra*, contains a single, minute granular cornutus, and *Cheritra* is intermediate with a single, stout, more or less curved spicule.

Over 30 genitalia preparations of Cheritrini have been made for me by Mr. Bennett. These, with further examples by Fruhstorfer, Corbet and others, have sufficed for this tribe. A total of 70 were used for Horagini, and over 100 are under study for the Drupadiini.

SEXUAL INSIGNIA

This term was introduced (Cowan, 1966*b* : 107) for the cumbersome phrase " secondary sexual characters ", but the explanation was omitted.

There are no female insignia in this or any related tribe, apart from the usual disparity in fore leg size. Both sexes have the usual integument of downy hairs about the wing bases and inner margins on the uppersides of the wings which undoubtedly provide protection for the body from damp and cold (cf. Wheeler, 1946). In the female, with the stouter body, there is rather more of this down on the hind wing than in the male. On the other hand, in the male the down, being brown, is considerably more conspicuous.

There are no male insignia in *Cheritrella* and *Ticherra*. All *Cheritra* have a small tuft of dark hairs rising from the basal portion of the radial vein of the male hind wing. Often the base of space 7 of this wing, which underlies the tuft, is bare of scales and white. Sometimes there is trace of a polished or ochreous brand on the fore wing underside, about the centre of the basal half of vein 1.

In *Ritra* males there is a large ovate discal patch of modified scales on the upperside of the fore wing and concolorous with it, centred about the origin of vein 4. This

brand seems to recur in a few random species of Lycaenidae (e.g. *Arhopala atosia* Hewitson, *Hypolycaena erylus* Godart) and appears to be of different function, though it may prove analogous, to the more frequent subcostal brand near the upper end of the cell. The latter varies in size (e.g. in *Charana jalindra* Horsfield, *Strymonidia* Tutt spp., and, very small, *Neolycaena* de Nicéville spp.) and has not apparently been investigated, but must surely be associated with the antennal club. Such patches of modified scales are often referred to as androconial, but androconia proper are very different and some revision of terminology is needed here. Hereafter the various insignia referred to are called either " tufts ", " brands ", or " polished areas "

EARLY STAGES

The only traceable original account of the early stages of any species is that of Davidson, Bell & Aitken (1896 : 388, pl. 5, figs. 6, 6*a*), often requoted since.

Their descriptions of the mature larva and pupa of *C. freja* show distinct affinities with those of the still more aberrant ones of Horagini. The larva, varying from pink to green with some brown dorsal markings, has only six pointed dorsal humps, none paired. The similarly coloured pupa is fastened to a stalk rigidly at the tail, standing free. It also has rough brown dorsal protuberances.

The recorded foodplants include *Xylia dolabriformis* and other Leguminosae, and *Cinnamomum* (Lauraceae).

EXTRANEOUS TAXA

The following two taxa have from time to time been included by authors in this tribe. Both are Drupadiini.

Myrina cinesia Hewitson, 1863 : 29, pl. 13, figs. 18, 19.
Biduanda cinesoides de Nicéville, 1889*b* : 166, pl. A, fig. 7.

GEOGRAPHICAL NOTE: NORTHEAST BORNEO

It will be seen in discussing Drupadiini that northeast Borneo, particularly east and south of Kina Balu, is considered a most interesting " clinocentre " where 3 or 4 subspecies (Malayan, Bornean proper, and Philippine) of one species apparently fly together and mingle. This seems more certain as recent material is found, and needs investigation. It is not the effect of altitude, being evident at sea level. It is not seasonal, occurring at all dates. But it may well be climatic, extreme local weather variation causing different conditions either at critical phases of individual specimens' development, or on different sides of a hill, promontory, or other geographical minor feature. A similar but less pronounced situation exists round the Sumatran highlands.

This phenomenon is relevant here in perhaps accounting for the sudden proliferation of *Cheritra* species at this centre. From Ceylon eastwards to this point only one, *freja*, has been known so far. In east Borneo there flies a second, *pallida* ; and in the islands to the east occur *orpheus* and *aenea*, either of which might yet be found here.

However, the well documented view of Everett (1889) that the two island chains north and south of the Sulu Sea which link northeast Borneo and the Philippines

align zoologically with Borneo rather than the Philippines was not greatly supported by the Horagini, and is not confirmed by the Cheritrini. The Philippine *orpheus* flies strongly in Palawan but not in Borneo, while *freja* and *pallida* do not occur east of Borneo. However, *Ritra aurea* has Palawan as its eastern limit.

ACKNOWLEDGEMENTS

I am most grateful to the Trustees and the Keeper of Entomology, the British Museum (Natural History), for permission to study the collections and libraries, without which facilities and the help of their staff this review could not have been contemplated.

Mr. N. H. Bennett prepared the genitalia slides from which the figures were photographed, and his care and patience have been of great help.

Specimens have been lent to me by Col. J. N. Eliot, Mr. J. A. Hislop, M.C., Dr. T. Norman and Mr. G. C. Stubbs, to all of whom I would like to express my thanks.

Key to the Genera & Species of Cheritrini

Note. In each subhead, wing-structure is given first, then markings, and finally ♂ genitalia characteristics.

1 Fore wing truncate ; termen angled at vein 4 and excavate thence to vein 7 ; consequently the cell exceeds half fore wing length and vein 12 is shorter than cell ; nevertheless vein 9 is long, with origin before mid vein 7 and well before end of 10. Hind wing termen evenly dentate from apex to vein 2 ; dorsum deeply excavate before the pendulous lobe ; dorsal vein sinuous and short, scarcely exceeding abdomen.

No male insignia.

Upperside blue or purple in both sexes, the black terminal border expanding at the fore wing apex ; no white markings at hind wing tornus. Underside more or less uniformly mottled dark and light brown ; no black, white, or metallic blue markings at hind wing tornus.

Uncus lobes very oblique, subtriangular. Valvae distally dentate, and horns originate from mid-costa as in *Ticherra*. Aedeagus large and robust, particularly the phallobase which is quadrate ; vesica with two prominent cornuti.

CHERITRELLA (one species) ***C. truncipennis*** (p. 84)

– Fore wing termen simple, at least below vein 6 ; cell not exceeding half fore wing length ; vein 12 about = cell ; vein 9 not long, origin at or just after mid 7 and just before end 10. Hind wing termen strongly produced and castellate between vein 3 and tornus ; dorsum normal.

Male insignia present except in *Ticherra*.

Upperside sexually dimorphic ; male uniformly coloured with a uniform or linear black border, female brown or dull orange-brown ; hind wing tornus always with black and white markings. Underside (except in extreme dry-season form of *Ticherra*) ground colour simple, pale, and always with hind wing tornal black spots and metallic blue scales.

Uncus lobes nearly erect and scarcely tapered. Valvae distally simply ovate ; dorsal horns (except *Ticherra*) from base of costa. Aedeagus short and stout,or long and slim, basally tapered ; vesica with one cornutus 2

2 In India–Burma, particularly in dry season, wings produced ; fore wing apex falcate and distinctly excavate at end of vein 6 ; at and near the equator, wings more rounded and normal.

No male insignia.

Upperside, male with comparatively broad black terminal border ; female very dark brown. Underside buff, dark orange, or pale ochreous according to season and race. The tails are brown, buff or white, never black.

Uncus lobes short, broadly ovate. Valvae dorsal horns rising from apex, ends flattened, tip rounded and incurved with a fine point. Aedeagus rim oblique, with two lateral flaps. Cornutus small, conical. ***TICHERRA*** (one species) ***T. acte*** (p. 85)

– Fore wing normal. Male insignia always present.

Male upperside black border linear (except in *C. pallida*). Underside markings simple. Tails white, often with black centre and shading.

Uncus lobes digitate. Valve horns solid, simple, originating from base of costa. Aedeagus rim not oblique, nor with lateral flaps 3

3 Size average. Shape orthodox ; fore wing vein 9 rising just before end of vein 10.

Male hind wing upperside with sub-basal tuft ; fore wing underside may be polished or branded about mid-vein 1.

Markings normal.

Male genitalia compact, sturdy. Aedeagus with long rasps on dorsal and ventral surfaces at apex. Vesica and cornutus well developed. ***CHERITRA*** (five species[1]) 4

– Large. Fore wing broad and short ; costa short, apex produced, termen slightly concave, tornus rectangular. Fore wing vein 9 comparatively short, originating just after end of vein 10.

Male fore wing with ovate discal patch of modified scales. Upperside ; male uniform cupreous red, female brown with basal orange suffusion. Underside abnormal ; plain grey-brown, with a white band from mid-dorsum to apex of hind wing, followed by a postdiscal curved undulate black band, a white band, and a submarginal series of black lunules before the marginal markings ; the black lunules bearing metallic blue scales in the tornal region. Tails more black than white.

Male genitalia all parts attenuated. Aedeagus apically slightly swollen and fluted. Vesica small ; cornutus minute, pear-shaped.

RITRA (one species) ***R. aurea*** (p. 97)

4 East Borneo. Underside like the local race of *freja*. Smaller, wings rather rounded.

Male upperside dull deep purple with a cloudy light blue suffusion and 2 mm. wide black terminal borders ; hind wing tornal markings and tails clear white.

Male genitalia large. Uncus lobes long and narrow. Aedeagus ventrally convex throughout its length . . . . . ***C. pallida*** (p. 88)

– Male upperside shining and without broad black borders.

Uncus lobes broader, shorter. Aedeagus ventrally convex only at its base . . 5

5 Widely distributed from Ceylon to Borneo.

Male upperside dark purple brown, obscurely shot dark purple, often with a cold steely sheen. Female dark brown ; the three hind wing subtornal white spots vary in size and may almost unite to form a band.

Uncus lobes broad and squat. Aedeagus ventral edge recurved . ***C. freja*** (p. 89)

– Rare and restricted. Male upperside with green or orange ; female usually orange-brown, darker outwardly.

Uncus lobes longer. Aedeagus straighter 6

6 Male upperside uniform dark shining green.

Male genitalia at least as large as *pallida* and *freja* 7

– Palawan—Philippines. Small (fore wing 17–19 mm.).

Male upperside shining purple with all veins broadly shining golden orange. Female dark brown, each wing centrally rufous. Underside white, shading to orange at termen and apex ; postdiscal lines broadly black below hind wing vein 4, above it faint orange or obsolete ; the usual tornal markings.

[1] *C. freja* and *orpheus* are well known ; *pallida*, *aenea* and *aenigma* are very rare, with similar undersides, and known for certain only from a few male specimens.

Male genitalia uniformly 20% smaller than any other species. Aedeagus ventrally straight . . . . . ***C. orpheus*** (p. 96)

7 South Sumatran (unique). Large (fore wing 22 mm.). Wings fuller and rounded.
Male upperside uniform shining pure green when viewed with frontal light, heavily shot purple with back light, and cupreous in a side light; tails white narrowly centred black. Underside as *freja frigga* from Sumatra.
Male with the usual hind wing tuft, also a prominent pale ochreous subdorsal brand on the fore wing underside. Aedeagus longer and stouter than *aenea*; vesica thicker, and cornutus substantially straight . . . ***C. aenigma*** (p. 94)

– Philippines (Mindoro). Smaller (fore wing 20–21 mm.). Wings more angular.
Male upperside much duller and browner than *aenigma*. Female, and underside, as *orpheus*. Tails mostly black.
Male tufted but without brand.
Cornutus tip sharply curved. Valve horns much longer than in other species ***C. aenea*** (p. 95)

CHERITRELLA de Nicéville

Cheritrella de Nicéville, 1887 : 456. Type-species, *C. truncipennis* de Nicéville, 1887, by monotypy.

The name, derived from *Cheritra*, is of feminine gender.

The main characters are given in the key. Both sexes have a peculiar prominent rufous brown scaling on the palpi, face, abdomen (ventral), wing fringes, tails and hind wing lobe. The antennae are naked and rufous brown throughout their length on the underside.

Cheritrella truncipennis de Nicéville

(Pl. 1, fig. 1 ; Pl. 2, fig. 13 ; Pl. 3, fig. 25)

Cheritrella truncipennis de Nicéville, 1887 : 456, pl. 39, figs. 3, 4. Sikkim.
C. truncipennis de Nicéville; Elwes, 1893 : 639. Karen Hills, mid-Burma.
C. truncipennis nagana Röber, 1926 (10 Oct.) : 376. Naga Hills, Assam.
C. truncipennis de Nicéville ; Seitz, 1926 (30 Nov.) : 991, pl. 159, fig. a1.
C. truncipennis de Nicéville ; Godfrey, 1930 : 343. North Thailand.
C. truncipennis de Nicéville, syn. *nagana* Röber ; Evans, 1932 : 287, pl. 29, fig. 68.

Well figured by Seitz for the male upperside of a dry-season specimen. Also figured by most of the principal works on Indian Rhopalocera.

The species seems to be commonest on the Burma–Yunnan border near Bhamo, and not to descend far into the tropics.

The contrast between fore and hind wing ground colour on the male upperside is unusual in this subfamily, but not unique, recalling one or two species in the Arhopalini and the Pratapini.

There are no sexual insignia. The female palpi are as usual longer than those of the male. Both sexes have rather more clothing of hairs than usual on both surfaces of the subdorsal area of the hind wing. On the upperside these are densest between veins 1 and 2 in the male, but, in the female, in the cell.

There is slight variation between a dark, broad-bordered wet-season form (as in my figures) with richly coloured and boldly marked underside (f. ***nagana*** Röber, **stat. n.**), and the dry-season form which is paler and duller, and on the upperside has

narrow borders with the hind wing blue area almost reaching the dorsum. The latter is often small.

The fore wing length varies from (16) 18–19 mm.

B.M. (N.H.). ♂ Holotype, ♀ Allotype, SIKKIM, June 1886 (*Möller*). 81 ♂, 21 ♀, SIKKIM, ASSAM, N. BURMA, YUNNAN ; 1 ♂, Victoria Point, S. BURMA (!).

TICHERRA de Nicéville

Ticherra de Nicéville, 1887 : 457. " Type *Ticherra acte* Moore."

The name, an anagram of *Cheritra*, is of feminine gender.

An interesting genus whose one species undergoes marked seasonal dimorphism north of Latitude 6°, where the wings are narrow and angular, but none in the equatorial area where the wings become increasingly rounded and normal, and the underside markings much more like those of *Cheritra*. It appears to be nearly as intolerant of the equatorial belt as *Cheritrella*, but slightly more adaptable. It would be interesting if *Cheritrella* were found in Sumatra, or more so in Borneo, to see what parallel subspeciation it showed there. It should logically much resemble the compatriot race of *Ticherra*.

The isolated *staudingeri* from Kinabalu, Borneo looks so distinct from *acte* as to warrant the view that it is a separate species, but its points of difference follow the geographical trends so well that it is included as a remote subspecies, emphasizing that it belongs to this genus.

The one species then has three named subspecies, to which is here added a fourth, and two infra-subspecific names.

The male genitalia vary geographically ; in the Indo-Burmese area they are relatively small ; they are heavier and more robust, like the insects themselves, in Malaya and Sumatra ; more so in Hainan and Borneo ; while in the last the pointed apices of the valvae are less incurved, so appearing longer, and the flaps at the tip of the aedeagus are closed.

Ticherra acte acte (Moore)

(Pl. 1, fig. 2 ; Pl. 2, fig. 14 ; Pl. 4, fig. 31)

Myrina acte Doubleday, 1847 : 21. Silhet. [*nomen nudum*].
M. acte Moore, 1857 : 47. N. India.
M. acte Moore ; Hewitson, 1863 : 30, pl. 12, figs. 8, 9.
M. symira Hewitson, 1876*b* : 152. Darjiling.
M. symira Hewitson, 1878 : Suppl. 26, pl. 3b, figs. 107, 108.
Cheritra acte (Moore) Doherty, 1886 : 127. East Kumaon.
Ticherra acte (Moore) de Nicéville, 1887 : 457, pl. 40, fig. 5 (d.s.f.).
Sithon acte (Moore) Staudinger, 1888 : 277, pl. 95, fig. (d5) (w.s.f.).
T. acte (Moore) ; de Nicéville, 1890 : 407, pl. 28, fig. 225.
T. symira (Hewitson) *idem* : 408, as ? ab.
T. acte acte (Moore) ; Fruhstorfer, 1912 : 245. Sikkim–Burma–Tongking.
T. acte acte f. *idina* Fruhstorfer, 1912 : 245. (d.s.f.).
T. acte acte (Moore) ; Seitz, 1926 : 994, pl. 146, figs. g5, 6 (d.s.f.), pl. 158, figs. h7, 8 (w.s.f. ♀).
T. acte (Moore) ; Godfrey, 1930 : 344. North Thailand.

The male upperside is very constant ; that of the female occasionally has the three

spots at the hind wing tornus widened, almost forming a white band as in Seitz' illustration.

The underside varies from the intense plain orange of the wet season extreme form (*acte*) to the dull buff with pencil-grey mottling of the dry season f. *idina* Fruhstorfer. Intergrades are more frequent than extremes, and occasional dwarfs occur in both sexes of both forms (ab. *symira* Hewitson).

As with *Cheritra freja*, the upperside hind wing white tornal spots become distinctly wider in the Tavoy–Mergui area. In fact some South Burmese and Thailand examples closely approach *liviana* but they still show seasonal variation, and the *acte/liviana* cline is probably athwart the Thai–Malaya border, as a broad transitional area.

Fore wing length is (13) 18–20 mm.

B.M. (N.H.). ♀ Holotype *acte* (no loc. label).
♂ Holotype *symira* (no loc.).
♂ Holotype *idina*, SIKKIM.

235 ♂, 174 ♀; KUMAON, SIKKIM, THIBET, BHUTAN, ASSAM, BURMA to MERGUI, CAMBODIA, THAILAND.

Ticherra acte retracta ssp. n.

(Pl. 1, fig. 3; Pl. 2, fig. 15; Pl. 3, fig. 26)

The latin adjective *retractus* means " revealed ", and also " remote ".

Two males and a female from interior Hainan represent this large dark subspecies, with wings less angular than in *acte* but with similar dark coloration.

The male upperside has much narrower terminal borders than any other race, and the two hind wing subtornal white spots are nearly obsolete. The female similarly has the subtornal white band much reduced, and the upperside colour is very dark brown. The tails are mostly black.

The underside is uniform dull ochreous with no markings internal to the postdiscal lines, but with prominent black and metallic green markings at the hind wing tornus.

Fore wing length is 20–21 mm.

B.M. (N.H.). ♂ Holotype; HAINAN: Interior Hainan, July, 1919 (*Bowring*).
♀ Allotype, 1 ♂; HAINAN: Mt. Wuchi, May 1903.

Ticherra acte liviana Fruhstorfer

(Pl. 1, fig. 4; Pl. 2, fig. 16; Pl. 4, fig. 32)

T. acte (Moore); de Nicéville & Martin, 1896 : 479. N.E. Sumatra.
T. acte liviana Fruhstorfer, 1912 : 245. N.E. Sumatra.
T. acte (Moore); Corbet, 1940a : 6. Perlis, N.W. Malaya.
T. acte liviana Fruhstorfer; Eliot, 1959 : 382. Malaya.

Not previously illustrated.

Martin reported the species as " common throughout the year " in northeast Sumatra. Though the first record for Malaya (from the extreme north) was not made till 1940, there is a female in B.M. (N.H.) labelled " Perak, 3–4,000 ft., June 1897; *Curtis* " (i.e. Charles Curtis, cf. Corbet, 1956 : 69), and the species is now well known from cleared slopes of the Selangor–Pahang hills.

Sumatran and Malayan specimens show a similar range of variation. The forewings are much less angular than in *acte*, and the underside colour shades evenly from bright ochreous at the fore wing apex to pale cream at the hind wing tornus, while the postdiscal black lines are narrow, faint on the fore wing but bold on the hind, and the tornal markings are well developed. The male upperside is rather lighter, bluer, than in the northern races, and in both sexes, particularly the female, the tornal white spots are more prominent. The fore wing length is (16) 18–19 mm.

In all these respects this subspecies is exactly intermediate between the wet season form of *acte* and *staudingeri*.

The figure of the genitalia clearly shows the lateral lobes at the apex of the aedeagus, and the incurved flattened horns of the valvae, each with its apical spine. These features are present but less pronounced in *acte* and *retracta*, and are rather differently developed in *staudingeri*.

" Type in coll. Morton, Lausanne." Fruhstorfer (1912).

B.M. (N.H.). 3 ♂, 14 ♀, SUMATRA (N.E., & W. coast) ; 1 ♀, MALAYA.

Ticherra acte staudingeri (H. H. Druce) **comb. & stat. n.**

(Pl. 1, fig. 5 ; Pl. 2, fig. 17 ; Pl. 4, fig. 33)

Biduanda staudingeri H. H. Druce, 1895 : 615, pl. 34, figs. 5, 6. Kina Balu.
B. staudingeri H. H. Druce ; Moulton, 1912 : 164.
B. staudingeri H. H. Druce ; Swinhoe, 1912 : 190.
Eooxylides staudingeri (H. H. Druce) Seitz, 1926 : 993, pl. 156, figs. g5, g6.

The illustrations quoted are good. The fore wing length is 20–21 mm.

This isolated subspecies appears to have found a congenial habitat for survival. Though there is only negative evidence (e.g. Moulton did not see it in Sarawak), it is suggested that it is not fully montane, but that it lives at about 6,000 ft. on sheltered uplands in N.E. Borneo, not exclusively on Mount Kina Balu. Little enough collecting has been done on this mountain ; far less on the lower ones round it.

Two points about the series in B.M. (N.H.) are noteworthy ; one specimen is labelled Brunei (whose shrunken territory still contains some areas of over 6,000 ft.) ; and the great majority of specimens were collected by Waterstradt, and are labelled with the same date and in good condition, suggesting a lucky local large-scale emergence.

According to Moulton (1915 : 161), Waterstradt made three lengthy visits to Kina Balu ; about 1894, about 1899 when he visited the summit, and about 1908. He also mentions further on that a later party found at the summit " Mr. Waterstradt's bottle ", but the date of his ascent is not given. These dates, which were verbal from the natives who helped, but were carefully checked, do not reconcile with our label data by several years. Possibly these printed labels of Oberthur's refer to a date of receipt from Waterstradt, or are otherwise in error.

" The types are in his [Staudinger's] collection." Druce (1895).

B.M. (N.H.). N. E. BORNEO: 9 ♂, 13 ♀, Kina Balu, 5 Aug. 1903, *Waterstradt* (ex coll. Oberthur) ; 2 ♀, Kina Balu, *Waterstradt* (coll. Adams, ex coll. Van der Poll) ; 1 ♀, Brunei, *Waterstradt* (*idem*) ; 1 ♀, Kina Balu, 1896, (coll Oberthur, ex coll. Staudinger ;—a paratype?) ; 1 ♂, 2 ♀, Kina Balu. (? a Pryer label).

CHERITRA Moore

Cheritra Moore, 1881 : 109. " Type *C. jafra*." (sic).

The name is probably a diminutive derived from the Greek word for a hand, referring to the palmate silhouette of the insect at rest, and is of feminine gender.

The status of at least three of the five species in the genus is conjectural. Females are similar where they fly together, but the males fall into three groups by upperside coloration ; *freja* and *pallida* are dark purple, *aenea* and *aenigma* shining green, and *orpheus* is purple half eclipsed by broad shining orange vein-striping. Never more than two species fly together. The common *freja* ranges from Ceylon through India to Borneo, flying with the unique *aenigma* in Sumatra and with the strange *pallida* in N.E. Borneo. Then the common *orpheus* ranges in the Philippines and Palawan, flying with *aenea* in Mindoro. The ♂ genitalia of all are constantly, albeit slightly, distinct, and it seems that they must be regarded as differentiated relict species derived from an ancient stem from which *freja* and *orpheus* are the most recent parallel twigs.

Further evidence that they are separate species is afforded by the shape of the rim of the aedeagus when in the continent state. In *freja* the dorsal and ventral surfaces at the apex are parallel and not swollen, the rasps folded closely back on themselves ; in *pallida* these surfaces are appreciably swollen, and in *aenea* and *aenigma* very much so ; while in *orpheus* they are thin but converge abruptly. These features were not given in the Keys, only the one *aenigma* being available for examination, one *aenea*, and three *pallida* (one more being left unmolested), but they appear constant.

Seitz, in dealing with the genus, illustrates nine specimens, but the undersides of only two Philippine ones. The boldly marked undersides in this area contrast with the uniform chalky white one with faint markings in Ceylon. Intervening subspecies have greater or less ochreous flush and prominence of the hind wing postdiscal black line.

Cheritra pallida (H. Druce)

(Pl. 1, fig. 7 ; Pl. 2, fig. 19 ; Pl. 4, figs. 34, 35)

Sithon pallida H. Druce, 1873 : 352, pl. 33, fig. 3. " Borneo ".
S. pallida H. Druce; Distant & Pryer, 1887 : 41, 268. Sandakan.
Cheritra pallida (H. Druce) H. H. Druce, 1895 : 610. Labuan (*Low*) (sic) ; Sandakan (*Pryer*).
C. pallida (H. Druce) ; Moulton, 1912 : 159. Labuan (*Low*) ; Sandakan (*Pryer*).

Ignored by Fruhstorfer and Seitz.

The specific characters and appearance are covered in the key and the illustrations. The apparent brightness of the upperside figured results from the unusual powdering of pale dull blue scales, and is quite distinct from the silky sheen of *freja* and other species. The hind wing upperside white tornal markings are much more prominent than in any male *freja* form, and they are preceded by a distinct black postdiscal band. The superficial resemblance to *Ticherra acte* is startling but irrelevant. The fore wing length is 17–19 mm.

The female is probably almost identical with *freja ochracea*, with smaller, rounder wings and perhaps blacker subtornally on the hind wing upperside. It is possible

that the wing bases on the upperside may be suffused with ochreous.

The ♂ genitalia illustrated are those of a specimen from S.E. Borneo, and of the Holotype. They show different conditions of the aedeagus ; the former in fully continent state, clearly showing the vesica and cornutus, and also the two long rasps, dorsal and ventral, each running outside and into the inner surface of the orifice ; the latter shows the vesica and cornutus partially everted, and the rasps consequently unfurled and almost straight.

It is interesting that this rare and elusive species was caught and named so early in the generic nomenclature. The type specimen was said by H. Druce (1873 : 337) to have been in one of the collections sent from Borneo " by Mr. Lowe during the years 1867, 1869 and 1872 ". The collector in fact must have been Mr. H. (later Sir Hugh) Low, who " came out to Sarawak in 1845 as a naturalist. In 1848 he became Colonial Secretary of Labuan where he [made the first recorded ascent of Kina Balu in 1851 and] remained till 1877, when he was appointed Resident of Perak. He retired in 1884 and died April 18th. 1895." [recte 1905] (Moulton, 1915 : 141). It was after him that the well-known Satyrid *Neorina lowii* (Doubleday, 1849 : pl. 61, fig. 4) was named. It was first referred to with the data " Sarawak, from Mr. H. Low's collection " (Doubleday, 1848 : 31, as *nomen nudum*). This entry in the 1848 appendix to Doubleday's *List*, and not in Part 1 (1844) or Part 2 (1847) suggests that Low sent his whole Sarawak collection back when he moved to Labuan, and that his subsequent " Borneo " specimens all came from the northeast ; in other words that *pallida* was from N.E. Borneo, not Sarawak. This view is supported by Druce junior's change of data for the Holotype from Borneo (*Lowe*) to Labuan (*Low*), and the presence of a printed Druce label " Labuan, *Low* " on the specimen. Moreover, Moulton's 1912 list of Bornean records repeats H. H. Druce's data verbatim, confirming that no Sarawak specimens were known. The specimen illustrated here is one from S.E. Borneo, an interesting addition to the range.

B.M. (N.H.). ♂ Holotype, LABUAN (*Low*) ; 1 ♂, 1 ♀, Tameang Lajang, S.E. BORNEO (*Wahne*) ; 1 ♂, S.E. Borneo ; 1 ♂, S.E. Borneo (*Schönberg*) ; 1 ♀, Melikop (i.e. 65 miles south of Kina Balu, and 100 miles S.W. of Sandakan, near Penungah) (*Cator*).

The two female identifications are presumptive.

Cheritra freja (Fabricius)

(Pl. 1, figs. 6, 8 ; Pl. 2, figs. 18, 20 ; Pl. 3, figs. 27, 28)

The subspeciation of this well-known species has already been referred to. Its upperside is remarkably constant ; in all races the tint of the male varies slightly, and in the female the hind wing white subtornal spots may widen to form a band.

The nomenclature of the nominate subspecies was investigated by Corbet (1941*b* : 105, 1956 : 65), and the repercussions on other subspecies by Cowan (1965*a* : 68–72). Unfortunately the typescript of the last paper was revised unknown to me and proofs were not circulated, resulting in the publication of several stupid misspellings and a complete additional sentence in the vital paragraph which is wrong and misleading. After explaining that two of the names in current use were incorrectly applied to

certain subspecies which therefore lacked names, I proposed two new names to fill the voids, and naturally designated holotypes for them in accordance with Articles 13 (a) (ii) and 72 (c) of the Rules of Nomenclature. These new names were not " replacement names " for existing valid ones, and the case did not come under Articles 13 (a) (iii) and 72 (d) of the Rules, in a no doubt well-intentioned attempt to comply with which my script was altered. The two commas in line 6 of page 70 of the article as published, and the sentence from " and deliberately " (sic !) in line 7 to the end of line 9 should be deleted. And the dates " 1927 " in lines 12 and 15 of that page should be changed back to 1932, thus agreeing with the References (as descriptions for the new names, reference was made to the most recent widely known and accessible work on the region affected ; Evans 1932, not 1927 which was only a reprint of the 1925 articles).

For illustration of the ♂ genitalia of *C. freja*, again two examples are used. The first, from a Sumatran specimen, shows the vesica at the mouth of the aedeagus, whose rasps are partly unfurled. In Mr. Bennett's beautiful preparation for the second, a Ceylon specimen, the vesica and cornutus are seen at full ejaculation, giving the aedeagus a remarkable and completely different appearance.

Cheritra freja pseudojafra Moore

(Pl. 3, fig. 28)

Cheritra pseudojafra Moore, 1881 : 110. Ceylon.
C. jaffra Butler, 1867 syn. *pseudojafra* Moore ; de Nicéville, 1890 : 410. S. India ; Ceylon.
C. freja pseudojafra Moore ; Fruhstorfer, 1912 : 243. S. India ; Ceylon.
C. freja pseudojaffra Moore ; Evans, 1925 : 766. Ceylon.
C. freja pseudojafra Moore ; Seitz, 1926 : 993, pl. 158, fig. f6. Ceylon.
C. freja pseudojafra Moore ; Evans, 1927 : 185. Ceylon.
C. freja pseudojaffra Moore ; Evans, 1932 : 288. Ceylon.
C. freja pseudojaffra Moore ; Woodhouse, 1952 : 137, pl. 21, figs. 18, 19.

Seitz figures only the female upperside. Woodhouse gives good illustrations of both sides of each sex.

The plain white underside with very fine grey broken postdiscal lines and submarginal lunules is distinctive. The tornal metallic scales are pale blue and more extensive than in any other subspecies. The uppersides are darker in colour in both sexes than in other races.

B.M. (N.H.). 10 ♂, 15 ♀, CEYLON.

Cheritra freja butleri Cowan

Myrina jaffra Godart ; Hewitson, 1863 : 30. " Assam ". (recte *jafra* & Java).
M. jaffra Godart ; Butler, 1867 : 34. " S. India, nec Assam ".
Cheritra jaffra (Butler) de Nicéville, 1890 : 410. Ceylon, S. India.
C. freja jaffra (Butler) ; Evans, 1925 : 766 ; 1932 : 288. S. India.
C. freja joffra (Butler) ; Seitz, 1926 : 993. S. India.
C. freja butleri Cowan, 1965*a* : 70. S. India.

Indian specimens of this species were originally identified in that country as *jafra* Godart (q.v. below), of which the erroneous spelling *jaffra*, which first appeared in

1829, soon became universal. The name *freja* (Fabricius) could not be placed (Hewitson, 1865 : 53).

Then Butler recognized that *freja* and "*jaffra* Godart" were conspecific, North Indian specimens being nearer the former and South Indian ones the latter. Ignoring their type-localities, he suggested that they should be known by those respective names to avoid making "*jaffra*" a synonym of *freja*. This line was followed by Kirby (1871), who had the constant advice of Butler.

Unfortunately the old erroneous spelling *jaffra* became attributed to Butler and applied to the S. Indian race, an inadmissible procedure and one Butler had not intended. As the true locality of *Myrina jafra* Godart is Java, the S. Indian subspecies had no valid name, and *butleri* Cowan was introduced to fill the vacancy.

It is emphasized here that *jaffra*, *joffra*, *pseudojaffra*, etc. are "erroneous subsequent spellings"; they do not rank as names or synonyms, and are not mentioned in the systematic list.

The white-banded female specimen used by Butler to illustrate his article is in the B.M. (N.H.) Type Collection.

The subspecies is similar to *pseudojafra* of Ceylon but the underside is creamier, more often with slight ochreous terminal shading. All markings are better defined, but the fore wing cell-end bar is still usually absent.

B.M. (N.H.). ♂ Holotype, ♀ Allotype, North Kanara; 55 ♂, 57 ♀, S. India.

Cheritra freja evansi Cowan

Myrina jaffra Godart; Hewitson, 1863 : 30. "Assam". (recte *jafra* & Java).
Hesperia freja Fabricius; Butler, 1867 : 34. "N. India".
Cheritra freja (Fabricius) de Nicéville, 1890 : 410. N. India.
C. freja freja (Fabricius); Swinhoe, 1912 (March) : 207. India–Borneo.
C. freja freja (Fabricius); Fruhstorfer, 1912 (April) : 243. India–Siam.
C. freja freja (Fabricius); Evans, 1925 : 766. N. India–Burma.
C. freja freja (Fabricius); Seitz, 1926 : 993, pl. 146, fig. g4; pl. 159, fig. b7. N. India.
C. freja freja (Fabricius); Evans, 1932 : 288, pl. 29, No. 70. N. India, etc.
Hesperia freja Fabricius; Corbet, 1941*b* : 105; 1956 : 65. Mergui nec India.
C. freja evansi Cowan, 1965*a* : 70. N. India–Tonkin, Burma, Laos.

Corbet, after careful investigation of Fabricius' type-specimens and material, found that *freja* was taken by Koenig in the Mergui Archipelago on one of his voyages from Tranquebar (S. India) and not, as Butler had assumed, in Tranquebar itself, still less in N. India whither Butler had shifted the name. Thus the widespread continental subspecies had no valid name, and *evansi* was proposed to fill the vacancy.

The subspecies is always more tawny and duller on the underside than the others; all markings are distinct including the fore wing cell-end bar; the fore wing markings are now ochreous not black. The tails, hitherto almost plain white, now have a distinct black centre line. There is considerable variation in size and a certain amount in appearance, reflecting the wide range in climate over the large area covered. Males often have traces of a small colourless area of polished scales about mid-vein 1 on the fore wing underside. Fore wing length is 16–22 mm., with a norm of 19–21 mm.

Seitz figures only the uppersides. The specimen figured underside by Evans is identifiable in the collection by minute blemishes as well as appearance, as one of his

from Myitta, Tavoy, on the cline with the next subspecies. Its whiteness and bright marking are more typical of the latter.

There are no clear cut seasonal forms but some extreme dry season specimens have the tornal spots tawny instead of black. An isolated series of 1♂, 3 ♀ from Vietnam (S. Annam, Xom Gom ; February, *Fruhstorfer* ; Suoi Dai, Nha Trang, 1916, *Gaullois*) ex coll. Rothschild, are all large, and bright on the underside as in true *freja*, and may represent a coastal subspecies on the S. China Sea. Otherwise, specimens from the entire continental region appear to fall within the variation range of the one subspecies.

B.M. (N.H.). ♂ Holotype, ♀ Allotype; ASSAM: Khasi Hills; 64 ♂, 13 ♀, N. INDIA, SIKKIM & BHUTAN ; 70 ♂, 21 ♀, ASSAM & MANIPUR ; 47 ♂, 23 ♀, N. BURMA to TONKIN ; 82 ♂, 32 ♀, continental BURMA & THAILAND, VIETNAM.

Cheritra freja freja (Fabricius)

Hesperia freja Fabricius, 1793 : 263. " Tranquebar ".
Cheritra freja regia Evans, 1925 : 766. Mergui.
C. freja freja (Fabricius) ; Corbet, 1941*b* : 105. Mergui nec India.
C. freja freja (Fabricius) ; Corbet, 1956 : 65, 347, 464. Langkawi Is.
C. freja freja (Fabricius) ; syn. *regia* Evans ; Cowan, 1965*a* : 69.

As Evans found, the underside of this subspecies is much more vivid, a clear white with sharply contrasted orange costa and termen to the fore wing and apex to the hind wing, and with prominent orange markings, including cell-end bar, on the fore wing, which are replaced by black ones in the tornal half of the hind wing. The upperside tornal white markings in both sexes are clearer than in any other race ; these quadrate spots in the females of all the preceding subspecies have been large and almost conjoined to form a white band, but hereafter the veins separating them are much more broadly black.

The males in a series from Langkawi, all taken in November or January, are shot on the upperside with a faintly greenish steely grey. This effect appears in individuals of all subspecies, and may be incidental, seasonal, or a maritime form. Langkawi specimens also show a tendency to the Malayan race in having the postdiscal black markings on the underside of the hind wing appreciably wider, comprising narrow bars rather than thick lines.

The fore wing length is 17–20 mm. (19–21 mm. in Langkawi).

The subspecies appears common, so it is not surprising that Koenig found it on his visit to Mergui.

B.M. (N.H.). 43 ♂, 26 ♀, PENINSULAR BURMA & THAILAND, Mergui Archipelago (including holotype and allotype of *regia* Evans) ; 6 ♂, 5 ♀, Langkawi Is.

Cheritra freja sabanga Toxopeus

C. freja sabanga Toxopeus, 1929 : 213. Pulau Weh (off N. Sumatra).

Not seen by me. Described from two specimens of each sex, it appears to lie between the Ceylon and the Mergui subspecies.

Wings very rounded. The upperside white spotting at the hind wing tornus prominent ; the female with a distinct violet tint. Underside hind wing white, fore wing creamy, termens narrowly bright ochreous ; the markings ochreous, prominent but narrow ; the metallic scaling bright and intense. Tails with a broad black centre line. (Adapted from Toxopeus). Size ?

It is interesting to note that none of the Cheritrini have ever been recorded from the well-worked Andaman and Nicobar Isles, where the Horagini are represented ; nor from Pulau Nias where both the Horagini and the Drupadiini have several species ; yet here is *C. freja* apparently flourishing on an intervening islet without either of the other tribes. Admittedly the Weh collection comprised only eleven species of Lycaenidae ; if the other tribes do occur they should be interesting.

Cheritra freja frigga[2] Fruhstorfer

(Pl. 3, fig. 27)

Cheritra freja (Fabricius) ; Distant, 1885 : 251, pl. 20, fig. 10. Malaya.
C. freja (Fabricius) ; de Nicéville & Martin, 1896 : 479. N.E. Sumatra.
C. freja frigga Fruhstorfer, 1912 : 243. N.E. (type) & W.C. Sumatra ; Malaya.
C. freja frigga Fruhstorfer ; Seitz, 1926 : 993, pl. 159, fig. b6.
C. freja frigga Fruhstorfer ; Corbet, 1956 : 347, pl. 46, fig. 193.

Seitz illustrates only the ♂ upperside, but Distant's and Corbet's figures of the underside (the latter specimen taken by me in Johore) well show the much more ochreous fore wing of the subspecies and the wider postdiscal black bars below vein 4 on the hind wing. The fore wing cell-end bar is again prominent, and the tails are more heavily black-centred. The fore wing length is 17–20 mm.

Little or nothing is known of the species from the whole of the 60,000 sq. miles of the southern third of Sumatra. There is one female specimen, very large (fore wing 24 mm.) and well marked, from Gunong Talang, Padang Bovenlanden ; ex colls. Van der Poll and Adams (a mountain exceeding 8,500 ft. which lies about 20 miles inland from Padang ; 100½° E, 1° S). This specimen might indicate a large south-western submontane race, or might conceivably pair with *aenigma* (q.v. below).

B.M. (N.H.). ♂ LECTOTYPE (selected May, 1941 by G. Talbot from Fruhstorfer's type series and here designated), " N.O. Sumatra ; *Martin* (i.e. N.E. Sumatra). 47 ♂, 33 ♀, N. SUMATRA (all north of equator) ; 1 ♀, BATU IS. (Fruhstorfer) ; 4 ♂, 2 ♀, SUMATRA: Lebong Tandai, W. coast (3° S) (*Brooks*) ; 24 ♂, 23 ♀, MALAYA and SINGAPORE.

Cheritra freja fracta ssp. n.

(Pl. 1, fig. 6 ; Pl. 2, fig. 18)

This is an interesting subspecies, intermediate between those of Sumatra, Java and Borneo.

The underside is much paler than those of *frigga* and *ochracea*, thus approaching *jafra*. But though the fore wing postdiscal lines are still present, the cell-end bar is very faint, and the hind wing markings are broad and emphatic as in *ochracea*.

The fore wing length is 19–20 mm.

[2] Like Friday, *frigga* is named after Frigg, the wife of Odin (whence Wednesday). Third of the ancient Norse and Teutonic gods after Odin and Thor (cf. Thursday) came Frey, after whose sister *freja* is named.

B.M. (N.H.). ♂ Holotype, ♀ Allotype, 5 ♂, 14 ♀, BANKA ISLAND (*Hagen*).

Cheritra freja jafra (Godart)

Myrina jafra Godart, 1824 : 592, 593. " ♂ ", recte ♀. Java.
M. jafra Godart ; Horsfield, 1829 : 118. ♂. Java.
M. jaffra Godart ; idem : pl. 2, figs. 5, 5*a*.
M. jaffra Godart ; Boisduval, 1836 : pl. 7, fig. 4.
Cheritra freja joffra Butler ; Piepers & Snellen, 1918 : 108–9, pl. 27, fig. 174.
C. freja jafra (Godart) Cowan, 1965*a* : 68–72. Java.

Reversing the subspeciation trend, this race from Latitude 8° south is much closer to *freja* from 12° north than to the intervening equatorial *frigga*, *fracta* and *ochracea*.

Piepers & Snellen well illustrate the underside, which is as white as *freja* but whose wing margins are less bright, ochreous rather than orange, with the slender postdiscal lines and fore wing cell-end bar uniformly dark and distinct.

The fore wing length is 18–21 mm., though dwarfs to 15 mm. occur in either sex.

The authorship and date Godart, 1824 are discussed by Cowan, 1967.

B.M. (N.H.). 20 ♂, 12 ♀, JAVA (all parts) ; 1 ♂, BALI (*Doherty*).

Cheritra freja ochracea H. H. Druce

(Pl. 1, fig. 8 ; Pl. 2, fig. 20)

Cheritra freja var. *ochracea* H. H. Druce, 1895 : 610. Borneo.
C. freja (Fabricius) ; Moulton, 1912 : 158.

Not previously figured.

Druce noted the strong orange flush over the underside of both wings, and the broad hind wing postdiscal black bars. The fore wing cell-end bar is usually imperceptible against the ground colour, and the postdiscal lines are often similarly obscured. Moulton found less well emphasized examples among Sarawak specimens, and chose to disregard the subspecific name, but there is now no doubt that Bornean specimens in general conform to this distinctive type and that *freja*-like individuals are exceptional.

The subspecies varies in size, usually tending to be small, the fore wing length being (17–) 18–20 (–22) mm.

Three specimens from Pulo Laut off the south coast are small (16–17 mm.) and noticeably pale below. They are rather worn but may indicate a further peripheral subspecies.

B.M. (N.H.). 33 ♂, 19 ♀, BORNEO (west, north, east & south) ; 2 ♂, 1 ♀, PULO LAUT.

Cheritra aenigma sp. n.

(Pl. 1, fig. 12 ; Pl. 2, fig. 24 ; Pl. 4, fig. 37)

The name is from the Latin noun meaning a " puzzle ".

Male upperside uniform lustrous deep yellow-green except for the normal black and clear white hind wing tornal markings and the hairy brown dorsum ; the usual black costal and terminal lines, but the extreme base of the hind costa white ; tails very white, with thin black centre line.

The colour is brilliant *Zephyrus*-green in normal diffused light, but assumes a pinkish or violet lustre if viewed in direct sunlight.

Underside pure white, shading to bright orange in the apical half of the fore wing and at the hind wing apex ; the usual markings at the hind wing tornus ; the postdiscal line broad and black on the hind wing up to vein 4, thereafter and on the fore wing faint and fulvous ; the fore wing cell-end bar well marked, and a broad nacreous area along the dorsum bearing a prominent broad ochreous brand about the centre of vein 1. Apart from this brand the underside resembles a large and well-marked specimen of the compatriot *freja frigga*. The fore wing length is 22 mm.

The unique specimen ex coll. Oberthür bears one of his printed labels reading " Liwa, S.O. Sumatra, 1400 metres. *W. Doherty*. 1890." By S.O., Oberthür means S.W., whereas to Fruhstorfer it would mean S.E. In 1890 the energetic Doherty collected successively in Malaya, Burma and Singapore, had an unsuccessful stay in Java (Batavia, Soekaboemi and Buitenzorg), and then sailed to Kroe in S.W. Sumatra ; from here he made trips " to Miva in the mountains, Marang on the coast "—and for 3 weeks in September to the island of Engano, finally returning via Singapore, Perak, Penang, Ranawng (Renong) and S. Burma to Calcutta. Neither Liwa nor Miva are shown on available large-scale maps ; in manuscript the names are alike and I fancy they are the same ; the locality, which will be mentioned again in discussing the Drupadiini, lies in the mountain range inland from Kroe which, owing to the oblique lie and shape of the island, might equally be termed S.E., S.W., or South Sumatra. This visit of Doherty's seems to be one of the very few ever made for collecting in the southern third of the island.

Horsfield (1829 : 118), in describing the Javan male of *C. freja* for the first time, said " Wings above blackish brown *covered with a beautiful saturated cupreous gloss slightly varying to purple . . .* ". The phrase italicized by me is startling. No *freja* (or *jafra*) has a beautiful nor saturated cupreous gloss, and no such specimens are known. Horsfield had two males, which his figures show had the normal Javanese underside pattern. He surely could not have had two male *aenigma*, which might almost fit the description. The more probable explanation is that he was over-enthusiastic about the dull *purple* gloss which on occasion very slightly varies to steel-grey.

B.M. (N.H.). ♂ Holotype. S. SUMATRA: Liwa, 4,000 ft., S. Aug./Sep., 1890 (*Doherty*).

Cheritra aenea Semper **stat. n.**

(Pl. 1, fig. 11 ; Pl. 2, fig. 23 ; Pl. 4, fig. 36)

Cheritra aenea Semper, 1890 : 215. Mindoro.
C. orpheus aenea Semper ; Fruhstorfer, 1912 : 243.
C. orpheus aenea Semper ; Seitz, 1926 : 994, pl. 158, figs. g5, 6.

Male upperside similar to *aenigma* but of a yellower green, and the hind wing tornus, dorsum and tails are almost entirely black. Underside similar to *orpheus* ; white sharply shading to fulvous at the fore wing termen, with all markings obsolete except those below hind wing vein 4, which are prominent. Size as *orpheus*, smaller and with less rounded wings than *aenigma* ; fore wing length 19–21 mm.

Seitz' figures are good, though the upperside colour might be greener.

The female upperside is probably dark brown with diffuse orange discal areas on each wing, that on the fore wing large, on the hind wing small ; the usual hind wing tornal markings clearly defined.

Semper described this species from six males, after discussing 73 specimens of *orpheus* from Luzon and Mindanao. The rarity of *orpheus* in Mindoro though common in Palawan to the west and the other islands in the east, and the presence of *aenea* apparently exclusively in Mindoro, remain unexplained.

B.M. (N.H.). 2 ♂, MINDORO (1, lacking abdomen ex coll. Hewitson, labelled *orpheus* ; 1, *Everett*, Dec. 1894) ; (?) 1 ♀, Mindoro, Laguna di Nanjan, 13 Mar., 1910.

Cheritra orpheus (Felder)

There can be no mistaking the male of this species. The upperside is violet but the outer margins, and all veins except the two along the black hind wing dorsum, are rich bright orange, giving the effect illustrated at Pl. 1, fig. 12. This effect is enhanced in side lighting, when the wings may appear completely shot with pinkish, metallic orange, or metallic golden according to the angle of incidence. There is no trace of green, and the separation of this species from *aenea* is quite evident by its appearance as well as structurally.

The species is of particular interest in that the orange veining indicates, in addition to all extant veins, those now obsolete in all Rhopalocera ; the anterior extension of hind wing vein 4 through the cell to the base ; similar extensions of fore wing veins 4 and 5, which merge about mid-cell to run concurrent to the base ; and the obsolete subdorsal vein from fore wing base to termen between veins 1 and 2. This phenomenon, materializing the phantom neuration of the complete Median and Second Cubitus, is closely but less completely paralleled in *Drina maneia* (Hewitson) (cf. Corbet, 1956 : 336), another individualistic species of a distinct tribe of " Theclinae ", and the only species of the subfamily known to carry true androconia (Corbet, 1956 : 306). No androconia can be detected in *orpheus*.

Subspeciation, again, is evinced mainly on the underside.

One female specimen from Luzon bears the small round Felder label " Jalajala ". It happens that the next species described by the Felders after *orpheus* was *Myrina jalajala* (a species in the Pratapini). The locality has been traced on an old map to a small promontory on the north shore of Lake Bai near Manila, which on modern maps is shown as Halahala, Talatala, or a variant.

Cheritra orpheus eurydice Fruhstorfer

(Pl. 4, fig. 39)

C. orpheus eurydice Fruhstorfer, 1912 : 243. Palawan.
C. orpheus eurydice Fruhstorfer ; Seitz, 1926 : 994, pl. 158, figs. g3, 4.

The male upperside orange shading is very vivid. The female is dark brown with the usual hind wing tornal markings, and with a broad dull orange-brown suffusion over the central half of the fore wing and spaces 2 to 4 of the hind wing.

The underside is whitish, bordered along the fore wing termen and at the hind wing apex with bright orange ; the postdiscal markings in the tornal half of the hind wing are comparatively narrow and irregular.

B.M. (N.H.). 7 ♂, 10 ♀, PALAWAN.

Cheritra orpheus orpheus (C. & R. Felder)

(Pl. 4, fig. 38)

Myrina orpheus Boisduval *in litt.* C. & R. Felder, 1862 : 292. Luzon.
M. orpheus Felder syn. *massiva* Hewitson ; Hewitson, 1863 : 30, pl. 12, figs. 10, 11 ; pl. 16, fig. 45.
Cheritra orpheus orpheus (Felder) Fruhstorfer, 1912 : 243.
C. orpheus orpheus (Felder) ; Seitz, 1926 : 994, pl. 146, fig. h8.

Hewitson's name *massiva*, already engraved on his plate, was a stillborn synonym, as he explained in his text.

A rather variable subspecies, but generally the male upperside is more yellowish orange, rendering the purple patches more apparent ; the female orange-brown areas are very variable in extent but usually the wing bases are darker. The underside of the fore wing is usually more suffused with orange, and the postdiscal black bars in the tornal half of the hind wing are slightly more heavily marked than in *eurydice*.

B.M. (N.H.). ♂ Holotype, ♀ Allotype, 13 ♂, 9 ♀, LUZON ; 3 ♂, 1 ♀, MINDORO ; 1 ♀, TICAO.

Cheritra orpheus orphnine ssp. n.

(Pl. 1, fig. 9 ; Pl. 2, fig. 21)

The name is from the Greek adjective meaning " dusky ", comprising red, white and black pigments.

In Mindanao a much more distinct race has evolved. The male upperside is bright like *eurydice*, but the female is normally uniform plain dark brown. The underside, particularly in the female, is much more suffused with orange, and the hind wing black postdiscal markings are broader and more regular.

The fore wing lengths of all subspecies vary from 17–19 mm.

B.M. (N.H.). ♂ Holotype, ♀ Allotype, MINDANAO, 1903–4 (*Waterstradt*) ; 12 ♂, 3 ♀, Mindanao.

RITRA de Nicéville

(Pl. 1, fig. 10 ; Pl. 2, fig. 22 ; Pl. 3, figs. 29, 30)

Ritra de Nicéville, 1890 : 399, 411. Type-species, *Sithon aurea* Druce.

An euphonic derivative of *Cheritra*, *Ritra* is of feminine gender.

The characteristics of this genus and species have already been discussed. Fruhstorfer described three subspecies as distinct from the nominal one. The senior, *volumnia*, is sound, but it is with some hesitancy that *cuprea* is retained separately, and likewise that *panowa* is upheld apart from *aurea*.

Fruhstorfer's collection passed to the B.M. (N.H.), but his unique female type of *panowa* is not there, nor is one female from his type-series of *cuprea*, nor his single Perak *volumnia* male. It is noticed that each of these was illustrated by Seitz, and it would seem that the originals for all Seitz' illustrations were kept separately.

The hind wing postdiscal black band follows parallel geographical subspeciation to that of *Cheritra*. In Sumatra and Malaya it is relatively narrow and disjointed ; in Borneo broad and solid.

It is interesting that *R. aurea* is found in Palawan but not further east. It thus overlaps *C. orpheus*, which there reaches its western limit.

Ritra aurea cuprea (Fruhstorfer) **comb. n.**

Ritra aurea (H. Druce) ; de Nicéville & Martin, 1896 (1 Feb.) : 479. N.E. Sumatra.
R. aurea (H. Druce) ; de Nicéville, 1896 (24 Mar.) : 185, pl. T, fig. 45. ♀. N.E. Sumatra.
Cheritra aurea cuprea Fruhstorfer, 1914 : 175. N.E. Sumatra.
C. aurea cuprea Fruhstorfer ; Seitz, 1926 : 994.

Fruhstorfer described this race from 5 ♂, 1 ♀, as being considerably smaller than any other, the male having smaller tornal white spots on the hind wing upperside than *volumnia*, and the female clearer white ones than *aurea*. He said the underside was blackish grey instead of brownish as in those two subspecies.

I find the size range the same, and the appearance almost identical with *volumnia*. Fore wing length 20–24 mm.

The name should be retained for the Sumatran subspecies pending the collection of more material from that island.

B.M. (N.H.). ♂ Holotype, ♀ Allotype, 3 ♂ Paratypes, N.E. Sumatra (*Martin*), ex coll. Fruhstorfer ; 4 ♂, 3 ♀, N.E., E. & W. coasts of Sumatra.

Ritra aurea volumnia (Fruhstorfer)

Ritra aurea (H. Druce) de Nicéville, 1890 : 411. Perak & Borneo.
Cheritra aurea volumnia Fruhstorfer, 1912 : 243. Perak (Type loc.) & Sumatra.
C. aurea volumnia Fruhstorfer ; Seitz, 1926 : 994, pl. 158, fig. 91.
R. aurea volumnia (Fruhstorfer) Corbet, 1956 : 347. Malaya.

Seitz' illustration of the male upperside is good.

Fruhstorfer's description from one Perak male and some Sumatran specimens starts with the phrase " almost double the size of *aurea* from Borneo ". He must have had an extreme dwarf of the latter. He then gave two features ; the upperside of all wings was somewhat darker and more strongly metallic (in the male) ; and the black postdiscal band on the underside of the hind wing was much narrower than in Borneo. Both these points are equally valid for Sumatran and Malayan specimens as compared to the majority of Bornean ones. The males furthermore tend to be slightly more purple-shot in certain lights. The fore wing length is 20–24 mm.

Corbet (1956 : 347) said that he had seen one Malayan male specimen without the fore wing brand. He gave no data, and it has not been possible to trace it. The size of the brand varies appreciably, but no examples have been seen where it even approaches obsolescence.

B.M. (N.H.). 3 ♂, 1 ♀, Malaya.

Ritra aurea panowa (Fruhstorfer) **comb. n.**

Cheritra aurea panowa Fruhstorfer, 1914 : 175. W. Borneo, Sintang.
C. aurea panowa Fruhstorfer ; Seitz, 1926 : 994, pl. 158, fig. g2.

Described from one ♀, as differing from *aurea* in the white subtornal band on the hind wing being darkened and formed of smaller neat grey components ; in the considerably darker, blackish rather than brownish, underside (which Seitz amends to " uniform dark yellowish grey, not brown "), on which the hind wing median and subtornal white bands are narrower, and the black spots being less dusted with blue.

Seitz' illustration shows the underside postdiscal black band to be unusually wide, thus reducing the width of the two white ones referred to by Fruhstorfer. But one can hardly agree with his repeated reference to the underside of *aurea* as brown ; it is grey in all subspecies. Females often have slight terminal fulvous suffusion at the fore wing termen, and when males are viewed against the light a slight orange flush is apparent by transparency.

Ritra aurea aurea (H. Druce)

(Pl. 1, fig. 10 ; Pl. 2, fig. 22)

Sithon aurea H. Druce, 1873 : 352, pl. 33, fig. 1. ♂. Borneo.
Ritra aurea (H. Druce) ; H. H. Druce, 1895 : 610. ♀.
R. aurea (H. Druce) ; Moulton, 1912 : 159. Sarawak & N. Borneo.
Cheritra aurea aurea (H. Druce) ; Seitz, 1926 : 994, pl. 158, fig. f7.

The original male was faithfully described and figured upperside, but the colour below was called " sooty brown " instead of mid-grey. This may have misled Fruhstorfer.

The male specimen here illustrated is typically marked but the fore wing upperside patches of modified scales cover rather smaller than average areas. These patches are often large and dark, but the dark appearance is probably due to age and wear.

The female is often described as coppery above. This is misleading, as it is in no way metallic. It is dull orange-brown with dark brown borders round each wing. Seitz gives a good illustration of a female with rather narrow borders.

The fore wing length is 21–25 mm., but throughout Borneo individuals as small as 17 mm. are not infrequent. Palawan specimens also are rather small.

Moulton says the female is rather the commoner. That this is not so in collections is probably due, in the case of *freja* and others as well as *aurea*, to the greater beauty, and freshness, of the male, and the selectiveness of the collector. In a total of about 4 years in Malaya I caught but one *aurea*, a female, and certainly found the female *freja* the more frequent.

This species was another of those first found by Sir Hugh Low.

B.M. (N.H.). ♂ Holotype, 31 ♂, 15 ♀, Sarawak, Brunei, Sabah ; 1 ♂, Tameang Lajang, S.E. Borneo ; 2 ♂, 1 ♀, Palawan.

SYSTEMATIC LIST OF THE CHERITRINI

CHERITRELLA de Nicéville, 1887	
C. truncipennis de Nicéville, 1887	Sikkim–Yunnan, continenta Burma & Thailand.
f. *nagana* Röber, 1926 (wet season f.)	
TICHERRA de Nicéville, 1887	
T. acte acte (Moore, 1857)	N. India & Thibet–Burma & Thailand.
f. *idina* Fruhstorfer, 1912 (dry season f.)	
ab. *symira* (Hewitson, 1876) (dwarf)	
retracta ssp. n.	Hainan.
liviana Fruhstorfer, 1912	Sumatra ; Malaya.
staudingeri (H. H. Druce, 1895)	N.E. Borneo.
CHERITRA Moore, 1881	
C. pallida (H. Druce, 1873)	N.E. & S.E. Borneo.
C. freja pseudojafra Moore, 1881	Ceylon.
butleri Cowan, 1965	S. India.
evansi Cowan, 1965	N. India–Tonkin, Burma, Thailand & Viet Nam.
freja (Fabricius, 1793)	Mergui, Peninsular Burma & Thailand.
syn. *regia* Evans, 1925	
sabanga Toxopeus, 1929	Weh Is. (N. Sumatra).
frigga Fruhstorfer, 1912	Sumatra ; Malaya.
fracta ssp. n.	Banka Is.
jafra (Godart, 1824)	Java ; Bali.
ochracea H. H. Druce, 1895	Borneo ; Po. Laut.
C. aenigma sp. n.	S.W. Sumatra.
C. aenea Semper, 1890	Mindoro.
C. orpheus eurydice Fruhstorfer, 1912	Palawan.
orpheus (C. & R. Felder, 1862)	Luzon ; Mindoro ; Ticao.
syn. *massiva* (Hewitson, 1863)	
orphnine ssp. n.	Mindanao.
RITRA de Nicéville, 1890	
R. aurea cuprea (Fruhstorfer, 1914)	Sumatra.
volumnia (Fruhstorfer, 1912)	Malaya.
panowa (Fruhstorfer, 1914)	W. Borneo.
aurea (H. Druce, 1873)	Borneo ; Palawan.

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INDEX

Cheritrini taxa are in **bold** type, synonyms and common erroneous spellings in *italics*. The Systematic List is on p. 100.

* Illustrated on Plates 1 & 2.

* Illustrated on Pls. 1 & 2.

PLATE 1

Uppersides of ♂ specimens of Cheritrini.

The Holotypes of the four new taxa are in the right column.

FIG. 1. *Cheritrella truncipennis* de Nicéville. Sadon, N.E. Burma, 8 Nov. 1927 (*Tytler*).
FIG. 2. *Ticherra acte acte* (Moore) f. *idina* Fruhstorfer (d.s.f.). Sikkim, 1886 (*Möller*).
*FIG. 3. *T. acte retracta* ssp. n. Holotype. Interior Hainan, July 1919 (*Bowring*).
*FIG. 4. *T. acte liviana* Fruhstorfer. N.E. Sumatra, Dec. 1892 (*Martin*).
FIG. 5. *T. acte staudingeri* (H. H. Druce). Kina Balu, Aug. 1903 (*Waterstradt*).
*FIG. 6. *Cheritra freja fracta* ssp. n. Holotype. Banka (*Hagen*).
FIG. 7. *C. pallida* (H. Druce). S.E. Borneo (*Schoenberg*).
*FIG. 8. *C. freja ochracea* H. H. Druce. Mengkuago, N.E. Borneo, 19 Apr. 1891 [*Pryer*].
*FIG. 9. *C. orpheus orphnine* ssp. n. Holotype. Mindanao, 1903–4 (*Waterstradt*).
FIG. 10. *Ritra aurea aurea* (H. Druce). Kina Balu (ex coll. Druce).
FIG. 11. *Cheritra aenea* Semper. Mindoro (ex coll. Hewitson).
*FIG. 12. *C. aenigma* sp. n. Holotype. Liwa, S.W. Sumatra, Aug.–Sep. 1890 (*Doherty*).

Colour note : Figs 1–8 are shades of purple ; 9, purple veined orange ; 10, bright orange ; 11, 12 green.

Photographic note : To distinguish the dark borders from the dark ground, figs 1–5, 7, 8 were photographed in blue light.

* Not previously illustrated.

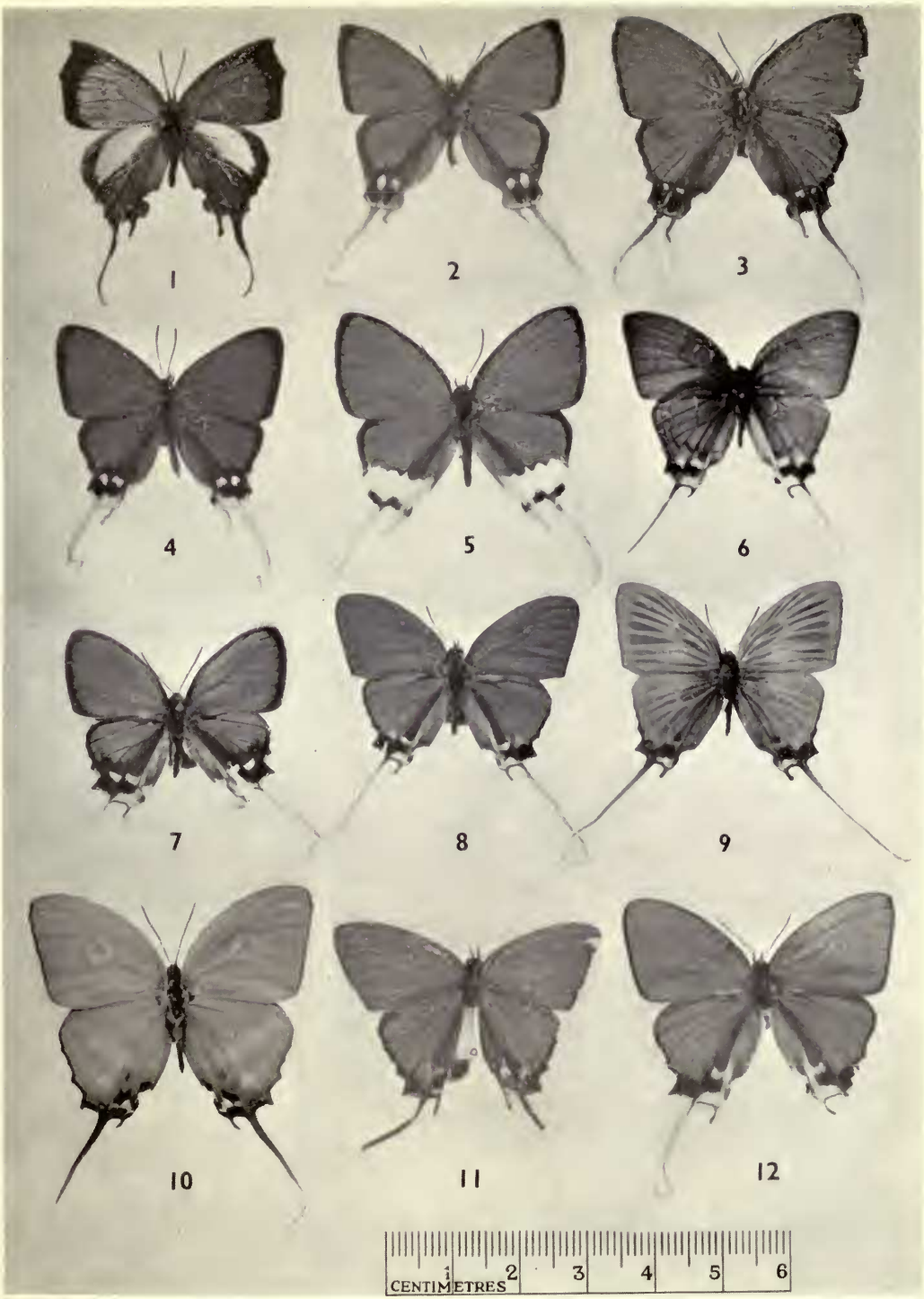

1
2
3
4
5
6
7
8
9
10
11
12
CENTIMETRES
1
2
3
4
5
6

PLATE 2

Undersides of ♂ specimens of Cheritrini.

(same specimens as on Plate 1)

FIG. 13. *Cheritrella truncipennis* de Nicéville.
FIG. 14. *Ticherra acte acte* (Moore) f. *idina* Fruhstorfer (d.s.f.).
*FIG. 15. *T. acte retracta* ssp. n. Holotype.
*FIG. 16. *T. acte liviana* Fruhstorfer.
FIG. 17. *T. acte staudingeri* (H. H. Druce).
*FIG. 18. *Cheritra freja fracta* ssp. n. Holotype.
FIG. 19. *C. pallida* (H. Druce).
*FIG. 20. *C. freja ochracea* H. H. Druce.
*FIG. 21. *C. orpheus orphnine* ssp. n. Holotype.
FIG. 22. *Ritra aurea aurea* (H. Druce).
FIG. 23. *Cheritra aenea* Semper.
*FIG. 24. *C. aenigma* sp. n. Holotype.

* Not previously illustrated.

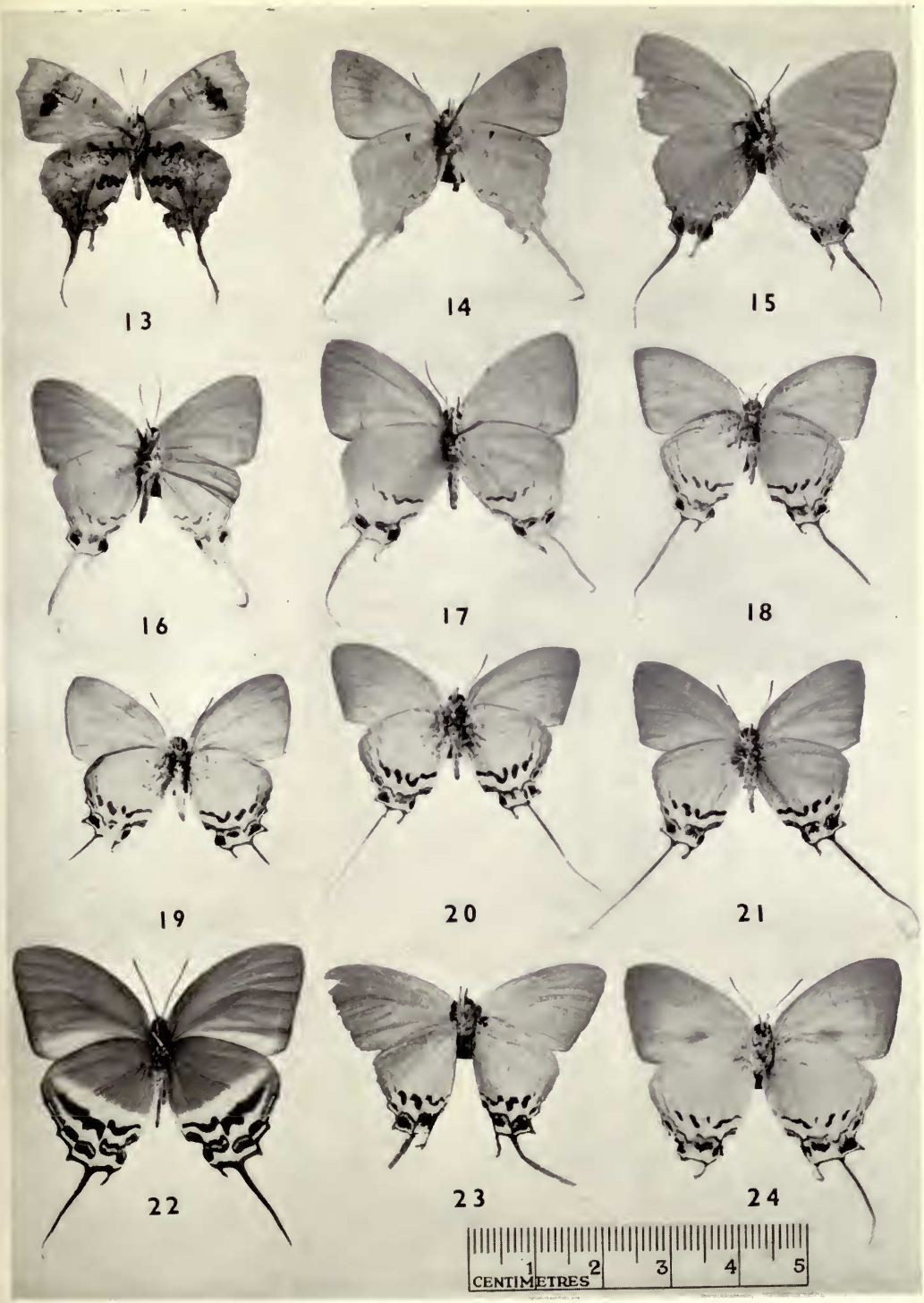

13
14
15
16
17
18
19
20
21
22
23
24
CENTIMETRES
1
2
3
4
5

PLATE 3

♂ genitalia of representative Cheritrini.

Lateral aspect from the left of, except fig. 30, the complete parts.

FIG. 25. *Cheritrella truncipennis* de Nicéville. Gen. Prep. NHB. 1965/2530. Note large quadrate phallobase of aedeagus, large curved cornutus (the smaller being in the partially everted vesica), the long oblique unci, and the elongate, upright, dentate valvae.

Specimen : Darjiling ; 28 May 1898 (*Bingham*).

FIG. 26. *Ticherra acte retracta* ssp. n. Holotype. Gen. Prep. NHB. 1955/1471. Note evenly tapered aedeagus, here seen with the vesica and minute cornutus fully everted and deflected from the uncus ; and the incurved pointed tips (like envelope flaps) of the flattened horns of the valvae.

Specimen : as Pls. 1, 2 ; figs. 3, 15.

FIG. 27. *Cheritra freja frigga* Fruhstorfer. Gen. Prep. NHB. 1955/1447. Compact, with a dense vesica and large cornutus. Note strong " rasps " on dorsal and ventral surfaces of rim of aedeagus.

Specimen : Sumatra (*Buxton*).

FIG. 28. *C. freja pseudojafra* Moore. Gen. Prep. NHB. 1965/2532. Same species as fig. 27, but here seen with vesica and cornutus fully everted and at extreme stretch.

Specimen : Ceylon, 1892 (*Doncaster*).

FIG. 29. *Ritra aurea cuprea* (Fruhstorfer). Gen. Prep. NHB. 1955/1436. This and fig. 25 above represent the extremes of the Cheritrini pattern.

Specimen : Holotype, N.E. Sumatra (*Martin*).

FIG. 30. *R. aurea aurea* (H. Druce). Gen. Prep. NHB. 1955/1437. An " exploded " preparation showing (a) the usual Cheritrine vinculum and uncus ; (b) aedeagus ; note suspensory process, small vesica and minute cornutus near the swollen apex ; (c) the right valva.

Specimen : Holotype, Borneo (*Low*).

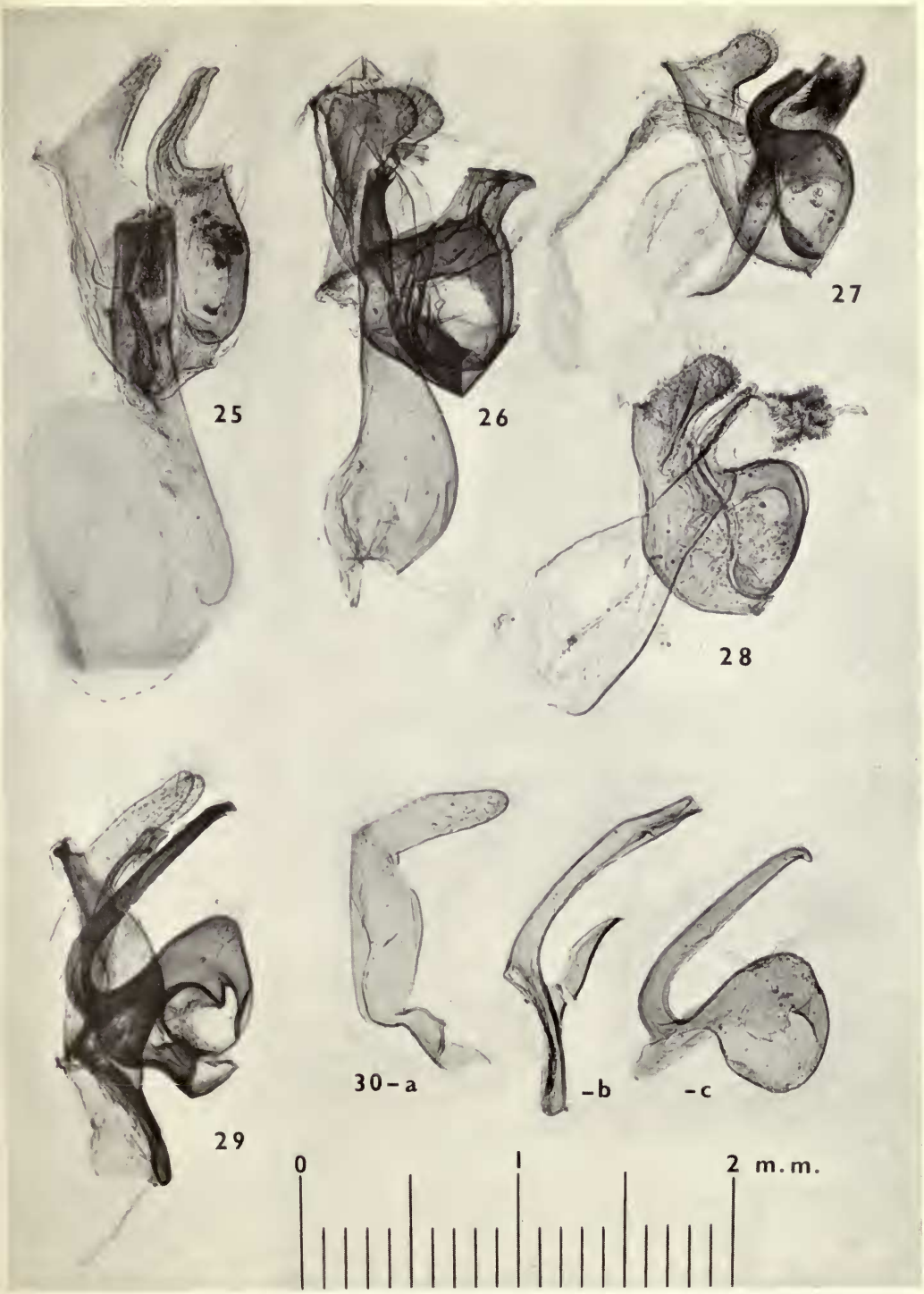

25
26
27
28
29
30-a
-b
-c
0
1
2 m.m.

PLATE 4

♂ genitalia of *Ticherra* and species of *Cheritra*

(complete, lateral aspect from left).

Fig. 31. *T. acte acte* (Moore) f. *idina* Fruhstorfer. Gen. Prep. NHB. 1955/1445.

Specimen : Mergui, Jan. 1926 (*Evans*).

Fig. 32. *T. acte liviana* Fruhstorfer. Gen. Prep. NHB. 1955/1472. The tips of the valvae of this subspecies are differently recurved. The aedeagus is here shown slightly rotated about its axis, displaying its lateral apical lobes.

Specimen : N.E. Sumatra (*Martin*).

Fig. 33. *T. acte staudingeri* (H. H. Druce). Gen. Prep. NHB. 1955/1446. A still further evolved subspecies.

Specimen : Kina Balu.

Fig. 34. *C. pallida* (H. Druce). Gen. Prep. NHB. 1955/1552. The cornutus is fully withdrawn to base of aedeagus.

Specimen : S. E. Borneo [*Pryer*].

Fig. 35. *C. pallida* (H. Druce). Gen. Prep. NHB. 1955/1453. The vesica and cornutus are everted, causing a restriction at rim of aedeagus ; the dorsal rasp is fully unfurled.

Specimen : Holotype, [N.E.] Borneo (*Low*).

Fig. 36. *C. aenea* Semper. Gen. Prep. NHB. 1955/1441. Short, thick-lipped aedeagus ; comparatively large vinculum, uncus, and valvae.

Specimen : Mindoro, Dec. 1894 (*Everett*).

Fig. 37. *C. aenigma* sp. n. Gen. Prep. NHB. 1955/1442. Very similar to *aenea*, but differences in valvae and aedeagus.

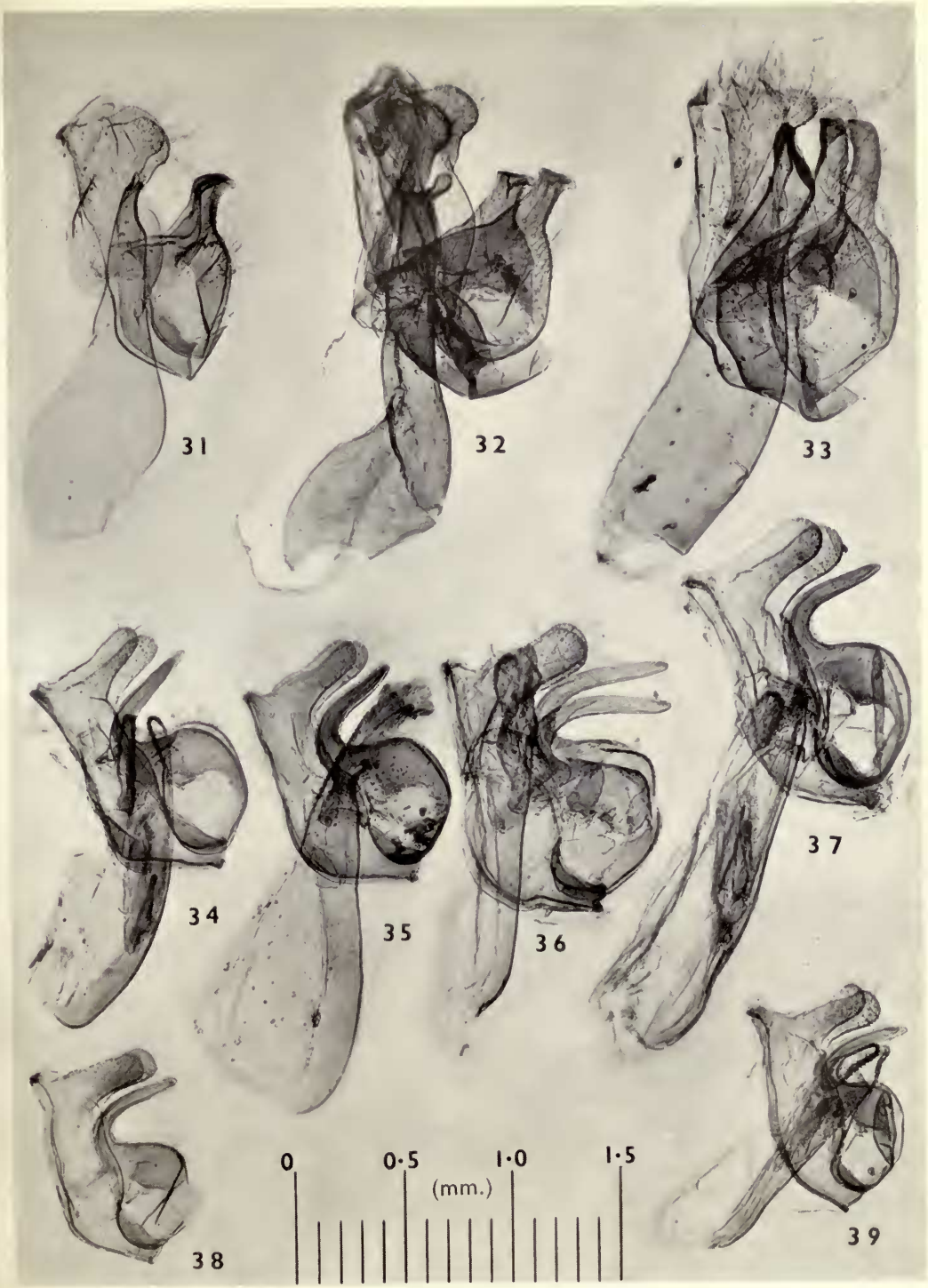
Specimen : Holotype, Liwa, S.W. Sumatra, Aug.–Sep. 1890 (*Doherty*).

Fig. 38. *C. orpheus orpheus* (C. & R. Felder). Gen. Prep. NHB. 1955/1440. Genitalia less aedeagus. Constantly small, and ;—

Specimen : Luzon (*Fruhstorfer*).

Fig. 39. *C. orpheus eurydice* Fruhstorfer. Gen. Prep. NHB. 1955/1473. —the lips of the aedeagus are always compressed.

Specimen : Palawan.


31
32
33
34
35
36
37
38
39
0
0·5
1·0
1·5
(mm.)